# GARDEN AND FOREST.

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## Defacement of Parks in Buffalo.

IN the annual report of the Buffalo Park Commissioners for 1891 the Superintendent complained that in the various minor squares, and to a certain extent in the larger parks, the plantations were suffering serious injury not only from thoughtless trespassing, but from purely malicious mischief. This complaint has been repeated by the Superintendent in every successive report, and in that for 1894, which has just come to hand, the Commissioners themselves say that in The Parade the greensward is so cut across with beaten tracks and the general aspect of the grounds is so shabby and forlorn that the place is an offense to the eye and an affront to common decency. But, worse than the destruction of the park, is the debasement of the public sense of right and wrong in this matter, for the Commissioners declare that it is useless to attempt any renovation of the place until a higher standard of public duty has been established. Trees, shrubs and plants are mutilated in broad daylight, lawns are seamed with ragged paths, outrages against common decorum are committed, and park ordinances are contemptuously ignored. Inasmuch as there are only seven patrolmen for the whole park system of the city, whose business it is to preserve order in as many widely separated parks, the police force is evidently not responsible for this lawlessness. And, even when arrests are made, public sentiment, expressed through the courts, sustains petty trespassing, and the offender knows that if he is arrested the Judge will be as likely to reprimand the patrolman for making the arrest as to punish the offender for the destruction of the public property. Under such conditions, all attempts at creating or maintaining anything like landscape beauty is a mockery, and all money spent for this purpose is worse than wasted. This vandalism is worse in one park than in others, but it is gradually spreading to all, so that, in the language of the report, "the standard of keeping for all the parks must finally be such as can be maintained on the sufferance of the meanest vandals of the community."

When the project of building a park in the centre of Manhattan Island was first suggested, some good men considered the scheme preposterous, because, as they asserted, it would certainly be made the field for the rough sport of the more depraved elements of the community. Wiser men held that a beautiful piece of scenery would largely be its own protection, and such a public regard for it would soon develop, that protection from thoughtless or malicious injuries could easily be secured. Of course, the city did not begin by putting a hundred acres or so of park land under the control of a single policeman, for wherever there is a proper regard for any pleasure-ground there will be a public sentiment which will ensure an adequate force for its safety. But at the very outset there never seemed to be a disposition to deface Central Park, or if there was, prompt suppression in the beginning prevented the growth of such a lawless sentiment. This has been the experience of most American cities. In San Francisco, where there are more showy flowering shrubs and trees in the parks than there are in any other American city, we have never heard of any trouble of the kind. There is no such trouble in Boston in the parks or in the Public Garden; there is none in Brooklyn, none that we ever heard of in Philadelphia or Baltimore. Even in Chicago, where the original design of the parks has been ignored, and where some of the ground has been treated in the most vulgar way by the managers, the condition of things is not so bad as it appears to be in Buffalo from the report of its own officers.

It is not to be assumed that the people of Buffalo are less law-abiding than the inhabitants of other cities, but in this one particular the community offers a striking example of the demoralization which invariably comes when offenses, which seem trivial at first, are permitted, until their constant repetition without reprimand or punishment invests them with the character of privileges and inalienable rights. The trespasser justifies his action by the statement that the people own the parks and, therefore, the people have a right to use them as they choose. The correct statement of his reasoning is that since all the people own the parks, therefore any one of the people can do with them as he pleases, and this is the essence of anarchy. The popular cry against boundary fences as obstacles which prevent the people from enjoying the parks—that is, barriers which prevent one man from entering the city property at any point he may prefer—and the cry for the free use of the turf because everybody owns the park meadows, and, therefore, anybody has a right to walk upon them, are both examples of this individual self-assertion which does not recognize the fact, which is the basis of civilized society, that a community has an organic life of its own, and that each man owes it respectful and loyal obedience. Every sensible man in Buffalo knows this, but there are some people in that city who have walked where they pleased so long that they now resent as a violation of their natural rights any attempt to restrain them from making paths across the turf, and the persons who have been permitted to break shrubs and carry away flowers for a time have come naturally to believe that the shrubs are planted for this purpose exclusively.

It seems that there was once a wooden fence, which in some measure protected one park from wear and defacement. When this began to need repairs it was broken at every point where any one wished to enter or cross the ground, and public sentiment had become so firmly set against a fence that no appropriation could be obtained for one. Of course, the park is completely wrecked, but the debasement of public morals is much more serious than the damage to turf or trees, for this generates and develops a spirit which ultimately makes all public property unsafe. The enlightened people of the town must realize that something should be done promptly to regenerate the public morality in this particular. Such a sentiment ought to make itself quickly felt by strengthening the protective force of the parks and by compelling judges to enforce laws against trespassers. It will be much harder to do this now, since these laws have been so long violated with impunity. But a beginning should be made at once. The public parks of our country in rapidly growing cities

are subjected to enough dangers, at the best, from threatened invasion and confiscation. But where the people stand by and see well-planned and beautiful parks turned into desolation, and property of unspeakable value to rich and poor laid waste, without any attempt to arrest the injurer, and even without protest or indignation, the case seems almost desperate. When parks become utterly abandoned and left a prey to trespassers, it would be a wise policy to run streets across them, cut them up into building lots, sell them off and put the money in the city treasury.

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We have received a chart of life-size pictures of the leaves of some of our native Oaks, and the drawings give proof of accurate observation of the subjects in all stages of their growth. This tree-leaf chart is printed on good paper, and a prospectus gives the information that others are to follow, containing the leaves of other families, and including the most valuable deciduous shade, nut and timber trees, native and foreign, which are adapted to our northern and middle Atlantic states. If these charts could be hung up in the school-room they would be an admirable help to pupils who wish to identify the various species and varieties of trees about them, and a skillful teacher could make a great use of them in encouraging habits of observation among the young. They would not only be useful in the school-room, but in the family circle, and they would familiarize children with the various forms of leaves and help to interest them in the study of our native trees. The drawings are made by Grace Anna Lewis, of Media, Pennsylvania, and the charts are sold at the moderate price of fifty cents each.

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## Botanical Notes from Texas.—XXIV.

CHEROKEE COUNTY lies in the central portion of eastern Texas, and a few years ago it was prophesied that its capital town, Rusk, was to become the chief iron-manufacturing city of the south, if not of the United States. Much money was spent in erecting furnaces, hotels and long brick blocks, and streets were laid out for long distances through the surrounding country, but the fires have gone out in the furnaces, while hotels, business houses and many dwellings are deserted. Valuable ore of iron is here in great abundance, it is true, and later on it will be brought into use, but the markets of the world do not need it yet.

This county and the adjoining ones are, perhaps, the best peach-growing region in Texas. A hundred car-loads of this fruit were shipped from Jacksonville alone last year, besides supplying the canning factories there. This is a small amount, it is true, but the industry is young yet. The best fruit-lands here are on the sandy tops of the iron hills; there the young fruit escapes injury from early frost, while in the valleys it may wholly be destroyed. This branch of horticulture is capable of indefinite profitable extension throughout eastern Texas. The practice of raising Peach-trees, largely from seeds, has developed many varieties of excellence hardly anywhere surpassed. The latent energies of the Peach, even after so many centuries of cultivation, is not easily to be overestimated. A species, that by a bold and successful effort at bud-variation, could develop so remarkable a variety as the Nectarine, is liable to perform still greater wonders in the future.

As the tourist goes over Texas he is surprised to see to how great an extent Cotton is still the field-crop of the state. The season of cotton-picking extends over the last six months of the year. The entire cotton product of Texas aggregates an immense sum of money for the state; that amount, divided among the owners of four millions of acres of land and the renters of it, the laborers, the pickers, the ginners, the oil men, the weighers, the buyers, the commission men, the railways, the storers and the shippers, does not leave a large sum for any of them. Those who fare the best seem to be the landowners, who are generally merchants, bankers or men of other professions living in the cities, and those who handle the crop after it is raised. Profitable or not, the present condition of affairs will only slowly change. Cotton is the surest money-crop of the south, and, therefore, many farmers are obliged to raise it, even though they buy the necessaries of living, which they might otherwise raise for themselves.

Witch Hazel, Hamamelis, is not so distinctively a fall-flowering shrub, as some botanists have written it. Differences of climate and soil may change the living ways of plants, as they change the living ways of animals and of men. A long residence in Texas has taught the Witch-hazel that it need not blossom in the fall, that it will have time enough to effect fertilization and to ripen fruits and seeds in the same year, and therefore the flowering is put off until February, and even later, and then have time to perfect seed before the year closes. That peculiar Sunflower, Helianthus angustifolius, abounds in eastern Texas from the Gulf to Red River. An interesting feature of the woods of this section in the early fall is the handsome fruit of French Mulberry, Callicarpa. A wine, or more properly a cordial of successful intoxicating quality, has been made from it.

One day as I was walking along one of the railways leading out from Jacksonville, I recognized the fragrance of the Sweetbrier, and soon saw a lusty plant of Rosa rubiginosa by the wayside. It was the only individual of the species that I had seen in Texas. It is rarely found wild in Kansas. In New York it is common along roadsides. Lobelia puberula is common here in damp places. It resembles L. siphilitica more than any species of the genus, but it is taller and slimmer than its congener.

The handsome Pink, Spigelia, is frequently seen in this county. It is the Pink of the medicinal firm of Pink and Senna, and the species, for its beauty, is worthy of a place in the wild corner of any garden.

Solidago odora is the commonest as well as the handsomest Golden-rod of eastern Texas, and often three to five feet tall. It is handsome enough for any garden, and pleasantly and so strongly odorous as to fill the air with its fragrance. Of our native species of Solidago, S. tortifolia resembles it most closely.

I met Hydrolea affinis near Jefferson, for the first time in Texas. H. ovata is much more abundant. They are rather handsome plants with spiny stems and bright blue flowers. The last-named species has a very downy calyx, a character which its congener does not possess. The Wild Turnip, Arisæma, Jack-in-the-pulpit, grows in this vicinity by the side of its homelier but commoner congener, A. Dracunculus. The family garden has no longer a corner for medicinal herbs, and strings of wild turnips no longer adorn the chimney-corner, for, though we are told that those bulbs lose all their virtue in drying, yet grated and mixed with honey or maple-molasses they were once thought to be a sovereign remedy for colds and coughs, especially in the case of children. In those earlier days, too, when the tea-canister was empty and the supply of coffee had been exhausted, the same closet contained dried roots of Water-avens, Geum rivale, a decoction of which, drank with milk and sugar, was no mean or unpleasant substitute for the costlier drinks.

Among many distinguished tree foreigners who have taken out naturalization papers in the United States, some of whom are living in eastern Texas, is Paulownia imperialis. That species has been largely planted for ornament, and has quickly run wild. Foreign plants as well as foreign people are rapidly taking possession of many parts of the country. We are loath to admit the Chinaman, but we freely admit the China tree to naturalization, and not only Melia, but also Paulownia, Ailanthus, Sterculia, Stillingia, Albizzia and others. The new forests of the south are likely to be largely of Mongolian extraction. It is strange that so unique and handsome a foreigner as Gingko biloba is seldom, if ever, seen on Texas lawns.

Two humble Asiatic plants, that probably came to the United States uninvited, are working a silent but important

change in southern agriculture. Those plants are Bermuda Grass, Cynodon Dactylon, and Japanese Clover, Lespedeza striata. Pity it is that part of the common name of the last-named species should be a misnomer, as the plant is not a Clover. Both of those plants have largely spread over the more eastern Gulf states. They will soon cover most of Texas. They are hardy and excellent forage-plants. Bermuda Grass, as a plant fully able to take good care of itself, will prove a great boon to the farmers of Texas. As a food for all live stock, as a shelter and a fertilizer of the soil, to hold the dew and the rain, and to prevent washing of soils and embankments, it has no superior. It is no wonder that in its native India, where it is more needed even than in Texas, the Hindoos rank it among their plant gods, and ascribe to it terms of reverence and worship. There have been many meaner things worshiped than Bermuda Grass.

Gainesville, Tex. *E. N. Plank.*

## Foreign Correspondence.

### London Letter.

NOTES ON ARISÆMAS.—A collection of these plants makes an interesting feature at Kew during the early months of the year, when most of them flower. Over twenty species are represented, out of a total of about fifty, which are distributed over the temperate and tropical regions of Asia, chiefly the Himalayas, and one is North American. Some of these deserve to rank with good garden-plants, though as yet they have received little attention from horticulturists—in Europe, at any rate. All the species have tuberous root-stocks similar to the Caladiums, which they also resemble in losing their leaves and resting for a period every year. In some species the leaves are folded at the base, so as to form a sort of stem, and the blade is trisect or pedate. In form and coloration the leaves are generally ornamental, the stalks being mottled or striped, and the leaflets margined with pink or brown. The inflorescence is in the form of a trumpet or funnel, one side being prolonged to form a long flap or hood, the tip of which is sometimes a long hair-like tail. In color the spathes vary, some being green and brown, others purple, with white stripes, others red-brown, and so on. The spadix in some of the species is often very long and filiform, and sometimes is clothed with long setose hairs. The flowering season extends over about two months. None of the species have a disagreeable odor when in flower. A vase filled with a collection of the flowers of Arisæmas is a pleasing and uncommon object. The plants at Kew are started into growth in January, when the tubers are shaken out of the soil in which they have been at rest since the leaves died away in July or August, when they were placed under a stage in a cool greenhouse. The tubers are cleaned as if they were Caladiums, and then potted, either singly or several together, in a mixture of peat, loam, leaf-mold and silver sand. The tubers are buried two inches below the surface, and the soil only slightly pressed about them. They are then placed on a tan or cocoanut fibre bed in a greenhouse where the atmosphere is moist and the temperature falls to about fifty degrees in cold weather. As soon as the growths push through the soil the whole should be well watered and afterward kept moist, these plants being, if anything, swamp lovers in a state of nature, as, indeed, are all tuberous-rooted Aroids of which I know anything. Should the fleshy white roots push above the surface of the soil a top-dressing with cow-dung and loam may be given. When the spathes open, the plants may be placed in the conservatory or a cool greenhouse. When the flowers fade, the plants should be encouraged to keep green as long as possible, so as to insure good tubers for the following year.

The American Indian Turnip, or Jack-in-the-pulpit, Arisæma triphyllum, grows well, and flowers annually here in a border against a south wall outside, its companions being the Sauromatums and Arum crinitum. These are left in the ground undisturbed year after year, and never suffer from cold. The position is one where the soil is always rather moist, a condition that appears to suit them.

The following are the best of those species grown at Kew during the last ten years:

ARISÆMA SPECIOSUM.—This is a beautiful plant, and as easily cultivated as a tuberous Begonia. It is a native of the Himalayas at from seven to ten thousand feet, and was first introduced in 1872, when a figure of it was published in the *Botanical Magazine*. It has since been figured in the *Gardeners' Chronicle* and *The Garden*. It produces one, sometimes two leaves, the petioles of which are two feet long, brownish green, with whitish marbling; the blade is tripartite, the leaflets each a foot or more long, nearly half as wide, narrowed at the apex to a tail-like tip, wrinkled and colored dark green, with a reddish margin. The spathe is erect on a stalk about half a foot long, and measures from the base to the top of the hooded portion six or eight inches, beyond which there is a tail two inches long. The spadix for four inches from the base is as thick as a man's little finger; beyond that it is a thin filamentose tail from one to two feet long. The color of the whole is rich vinous-purple, with lines of grayish white running from the base of the spathe upward. The purpose of this tail attached to the spadix and reaching to the ground is supposed to be to lead crawling insects up to the flowers to aid in fertilization. A remarkable character in this species is that of being sometimes monœcious and sometimes dicœcious. It ripens seeds under cultivation.

ARISÆMA FIMBRIATUM was introduced from Penang in 1884, when figures of it were published in the *Botanical Magazine* and elsewhere. Recently Messrs. Sander & Co. have imported it in quantity. It has a solitary leaf, three ovate acuminate-tailed leaflets of a rich green color borne on a red-brown petiole a foot long. The spathe is six inches long, hooded, the lower portion light green, with white stripes, the upper purple and white; the spadix is thin and tail-like, hangs down to a length of six inches, and is clothed with blackish bristle-like hairs an inch long. This species requires stove treatment always.

ARISÆMA FILIFORME is a Malayan species of recent introduction. It has pedate leaves, the leaflets lanceolate-acuminate, sometimes a foot long, the petiole red-brown, with gray marbling. The scape is two feet high and bears several smaller cauline leaves; spathe-tube two inches long, green, shading into brown; limb five inches long, two inches wide, hooded and colored dark brown, with a metallic-green shade; spadix six inches long, the upper portion narrowed into a smooth brown tail-like appendage. Though wanting in brilliancy of color this is a handsome stove plant. It should be always kept in the stove and moist. At Kew it does not die down, in which respect it resembles Richardia Æthiopica. I do not see any difference between A. filiforme and A. Wrayi, of which there is a figure in the *Botanical Magazine*, t. 7105, beyond that of color, the spathe of the latter being pale green, almost white in places, and the tail a little longer. They are alike in habit and stature and in behavior under cultivation. Both of them are in flower at Kew now.

ARISÆMA GRIFFITHII-HOOKERIANUM was introduced and flowered in 1879 by Mr. H. N. Elwes from the Sikkim, Himalaya. There is a figure of it in the *Botanical Magazine*, t. 6491. It has a large tuber, usually two leaves, the petioles of which are a foot long, half an inch in diameter, smooth and green; the three leaflets are nearly a foot long, six inches wide, dark green, tinged with yellow along the margins. The flower-stalk is short, and it bears an erect spathe, which is tubular below and colored black-purple, with paler stripes; the upper portion is hooded six inches across and curiously inflated on each side, suggesting the puffed-out shoulders of a lady's dress of the present fashion; this portion of the spathe is dark purple, with green reticulating veins. The spadix is thick at the base and elongated above into a hair-like appendage, which is sometimes three feet long. This is one of the most remarkable

plants in the order, the structure of the spadix being as singular as that of the pitcher of Darlingtonia Californica.

Arisæma Murrayi was introduced from Bombay in 1847. There is a figure of it in the *Botanical Magazine*, t. 4388. It has large, potato-like tubers, a solitary leaf, the stalk of which is eighteen inches long, green, mottled with red-brown, and the leaflets are oblong-acuminate and six inches long; the spathe is five inches long, with a green tube, the upper portion white, curved over and forming a hood, the sides of which are purple. The spadix is short and wholly enclosed in the spathe.

Arisæma utile is a native of the Himalayas, whence it was first introduced in 1879. It resembles A. Griffithii in all its characters except that the spathe is smaller and is chocolate-brown in color. By some the two are considered to be only forms of the same species. Sir Joseph Hooker found it at an elevation of 13,000 feet in Sikkim; it may therefore be hardy, but I have never seen it tried out-of-doors. Sir Joseph Hooker says it is the commonest species in Sikkim, where its tubers are used as food by the hill tribes after they have been macerated and boiled.

Arisæma nepenthoides is another Himalayan species which was first cultivated here in 1879. It has a large turnip-like tuber, leaves two feet high, with the blade divided pedately into five oblong tailed leaflets, and the stalks colored green, with dull red blotches. The flower-stalk is nearly as high as the leaves, and the spathe is erect, six inches long, shaped somewhat like the pitcher of a Nepenthes, colored brown, the upper portion folded over, forming a tailed flap, colored yellow-brown, the ears green and brown, with dark spots; the spadix is erect, shorter than the tube and whitish in color. This is altogether a pleasing plant in the singular coloration and elegant form of its spathe. It is very easily kept in health.

Arisæma ringens (præcox) is a Japanese plant which has long been in cultivation here in the gardens of the curious. At Kew it is planted among Sikkim Rhododendrons, etc., in the large temperate house, where it produces very large lustrous green trifoliate leaves and large hooded flowers, which are green, with white stripes on the outside, black purple, with white stripes inside. The top of the spathe is folded over and then contracted, so as to form two round window-like apertures, one on each side.

London. *W. Watson.*

## New or Little-known Plants.

### Gladiolus tristis concolor.

THIS plant, of which a figure is published on page 75 of this issue, was probably much more common in gardens in the early years of the century than it is now, as it is one of those south African bulbous plants which were once the delight of English gardeners, but now are well-nigh forgotten by the present generation of plant-lovers.

Gladiolus tristis concolor is one of the group of species distinguished by the oblong spathulate and acute segments of the flower and by long narrow leaves so strongly ribbed that a cross-section of one of them has the form of a cross. This variety only differs from the typical plant in the absence of spots from the pale yellow flowers, which are marked down the middle with a narrow band of rather deeper yellow. The flowers, which are nearly two inches across the expanded segments, are produced in loose, elongated, two to three flowered panicles, enclosed at the base by the dark green leaves, and, although nearly scentless during the day, exhale a delicate, fragrant perfume in the evening.

The plant from which Mr. Faxon has made the drawing, which is reproduced in our illustration, was raised from a corm sent to us by Mrs. Elwood Cooper, of Santa Barbara, California, in whose delightful garden this Gladiolus is well established, flowering there profusely in the open ground in the early spring months. It was potted at the end of September and placed in a cool greenhouse, where it produced thirteen leaves from the small corms which this species appears to produce freely, like several other Gladioli, on top of the old corm. The leaves were about two and a half feet long, and six of them bore flowers, indicating the free-flowering quality of this species, which is certainly one of the best winter-flowering decorative plants which have come under our notice for a long time. Its free habit and the size, beauty and fragrance of the flowers should commend it to florists as a good companion for the Freesia, which this Gladiolus, although it does not produce so many flowers on a stem, surpasses in their size, form and coloring. It grows so freely in a low temperature, too, and can be had in flower so early in the winter, that it would be a cheap plant to raise; and it is not improbable, too, that it would make a good house-plant, although on this point we speak without experience.

## Plant Notes.

Boronia megastigma.—In the early volumes of Garden and Forest we frequently called attention to this Australian shrub particularly for the delicious, and yet intense, fragrance of its flowers. At this season one or two plants will perfume a very large greenhouse, and a spray or two will pleasantly scent a large room. This shrub is about two feet high, the main branches being erect, and the opposite branchlets spreading, with flowers borne in the axils of the sparsely set narrow leaves. They are bell-shaped or semi-globular, solitary and pendulous, half an inch in diameter, of a reddish chocolate-brown, or, as the catalogues say, maroon-purple on the outside, and clear yellow within. In a general way it may be said that this Boronia needs a cool-greenhouse treatment, like the Cape Heaths, but when grown from cuttings these should be taken from the branches somewhat hard rather than the more sappy ones, and as the plants do not require much root-room small shifts are the best. When the plants are done flowering they are cut back, so as to make thick, stocky plants, and it is well to stop the shoots often to prevent them from running up into thin and rather scraggly specimens instead of well-furnished and compact bushes. It is essential that the pots should be well drained as they are shifted on, since stagnant water is very injurious. During the summer these pots can be plunged outside in a position where the midday sun does not strike them. Mr. Robert Cameron writes from the Harvard Botanic Garden that he takes cuttings from the moderately hard growth, plants them in four-inch pots which are filled with a compost of finely sifted loam, peat and sand to within an inch of the top of the pot. Over this is spread a layer of very sharp sand. When the cuttings are inserted they receive a thorough watering, and are then placed under a bell-glass in a greenhouse where the temperature ranges from forty-five to fifty, and are kept shaded from bright sunshine. The plants blooming in the Botanic Garden now, however, were raised from seed sown two years ago. Seeds germinate readily in the same temperature required for cuttings, and they soon make nice plants. A few years ago it was noted in this journal that Mr. C. M. Atkinson tried the experiment of cutting these plants back severely in spring and planting them out in the open air. They seemed to make a stronger and healthier growth than those kept in pots, and they flowered equally well.

Cestrum elegans.—The flowers of this rather old-fashioned plant are very attractive in the cool greenhouse just now. When grown in large pots, the plants make shrubs five feet high. The long arching branches, with their ovate lanceolate leaves, are terminated with large dense cymes of purplish red flowers. Besides its value for decorating the conservatory, the sprays are good for cutting. In spring the plants should be cut well back and repotted, and in May plunged outside in the garden, where they make good growth during the summer. They are taken back to the cool greenhouse in the fall, where they give a quantity of flowers during the dull months of winter. This Cestrum

does well in rich loam, and in winter requires a position where it can get plenty of light in a greenhouse where the temperature ranges between forty and forty-five. It can be grown from cuttings, which root very easily if given a little bottom-heat and shaded from bright sunlight.

Fig. 10.—Gladiolus tristis concolor.—See page 74.

IRIS RETICULATA KRELAGEI.—Bulbs of this Iris, which were set out last autumn, will now be in bloom in a cool and sunny greenhouse. Like others of the reticulata group, they will endure more heat than most hardy Irises, and can be forced into bloom earlier if necessary. The flowers of this plant are a reddish purple, although they vary considerably in shade, and the claw is veined more conspicuously than in the type, and it has a yellow crest. The colors generally are not as attractive as are those of several other varieties of I. reticulata. Mr. Michael Barker writes of some of these plants now in bloom at Cornell University, that their leaves are four inches long and the flowers an inch and a half in diameter. Mr. Barker, in his *Handbook of the Irideæ*, says that this variety is the common wild form of the Caucasus, and Professor Foster suggests that it might be regarded as the typical form, since what is known as the true I. reticulata is rarely found among imported bulbs, and when crosses are obtained between the type and Krelages variety, the seedlings chiefly follow the characteristics of the latter. Several bulbs are often planted in a single four or five inch pot, but this is an undesirable method, because the bulbs vary greatly in time of their flowering, and there is a remote chance that any three or four would be in bloom at the same time. They should be planted singly in small pots.

## Cultural Department.

### Cultivating the Persimmon.

IN vol. i., page 514, of GARDEN AND FOREST, Charles Naudin speaks briefly concerning the improvement of North American fruits, confining his remarks principally to the Papaw, Asimina triloba, which he characterizes "the best of the wild indigenous fruits of North America." In a foot-note the editor added the Persimmon, Diospyros Virginiana, as being well adapted to cultivation and improvement, and he remarked that "there seems to be no reason why the American Persimmon cannot in time be made to equal the Japanese varieties in size and flavor." But little attention seems to have been given to the subject, however, by fruit-growers, and persimmons still remain among our neglected wild fruits. But we have recently inaugurated a series of experiments in this state, and Illinois has done the same, which have for their object the improvement of these fruits, both of which are indigenous to this state, the Persimmon being especially adapted to the soil and climate of the southern half of each, but it grows to some extent further north. From the latitude of Indianapolis southward it grows luxuriantly without cultivation, but the fruit is generally small. Heretofore suckers have been used almost exclusively in propagating, but these experiments will include budding and grafting the better varieties as well as cross-fertilizing with a view of improving the fruit by increasing the size and reducing the number of seeds and improving its flavor. The work will be done mostly at one of our substations.

In speaking of this fruit at a farmers' institute, Mr. O. M. Hadley said that, although this fruit has been so sadly neglected in the past, it is certainly a fruit that should be better appreciated by all, for it has many desirable qualities. The tree is usually small, but has in some instances been found to reach a height of seventy feet. We rarely find it fruiting north of the forty-second parallel. There are various reasons why it has been hitherto neglected. One is that, in most instances, suckers or seedlings have been used for planting, and these generally die, or, if they live, they produce inferior fruit or prove to be sterile. Another discouraging feature is that it requires a long time for the trees to come into bearing. But, since new modes of propagation and cultivation have been introduced, the persimmon has become a fruit upon which we can rely. Sprouts and seedlings should no longer be used. We might as well rely upon seedling Apples, Pears and Plums as upon seedling Persimmons, for nearly every seed will produce a new variety, differing from the parent fruit in size, shape and quality. In the present method of propagation, seedlings are grown till one or two years old, and they are then budded and grafted. In this way, when one chances to strike an unusually desirable variety, he may reproduce it to a certainty. Then he does not have to wait ten or fifteen years for a tree to begin bearing, for we now have a number of varieties which begin to fruit in from three to five years from the graft. Our best persimmons ripen without frost, contrary to the general opinion that no persimmon is fit to eat until it has been well frozen. There are varieties that ripen in August. The Golden Gem and Early Golden, two of the best, ripen early in September. Many excellent varieties, however, do not ripen until late in October or November, and some even

fail to develop a desirable flavor until midwinter, but this makes them all the more valuable by extending the season. The early-ripening varieties are preferable because of their greater market value, since they present the best appearance, and have often sold for from six to eight dollars per bushel in the large cities. An important point to be considered in selecting a variety is the number of seeds found in each fruit. Most of our old varieties are full of large seeds; but in many of the newer varieties only two or three seeds are found in a single specimen, and some are entirely seedless.

The Persimmon is easily grown when once fairly established, but it requires careful handling at first. When well established we may expect the tree to live and bear an abundance of perfect fruit every year, for neither tree nor fruit is molested by insect or fungi, as are almost all of our other fruits. If one has an old tree which bears inferior fruit it may be top-worked in the same manner as the Apple, Pear and Plum. In this way one may soon transform the worthless tree into one bearing rich, luscious fruit. There are few people who are not fond of sweet, well-ripened persimmons; they are good when eaten from the hand; better with cream and sugar, and they are best of all when made into a pudding, as is done in North Carolina.

Experiment Station, Lafayette, Ind. *J. Troop.*

## The Grapery.

THE most troublesome insects in the grapery are the mealy bug and the red spider. In houses devoted exclusively to the Vine the first of these pests should never be seen, but since it is often necessary to use Grape-houses for other plants, the mealy bug will sooner or later appear, and once in it is hard to dislodge. This is the best season to attack it. All loose bark must be removed, but it is not necessary to peel the rods entirely, as is sometimes done. Only those pieces of bark which come away easily need to be removed, for these alone are apt to harbor the insects. The kerosene emulsion should be made into a wash for cleaning, not the rods alone, but the rafters, the walls, and, in fact, the entire house. Care should be taken to get it into all the crevices, and this will destroy all active insect-life. The old-fashioned method of painting the rods with a composition of clay, kerosene, sulphur, etc., is unnecessary, as well as unsightly, although it is still preferred by many, and if it is done thoroughly with a stiff brush, so long as the buds are not injured, it will be all the protection that is needed.

As the red spider thrives in a dry atmosphere, water is the chief means of its destruction. It is hard to get rid of during the hot summer, but copious syringing continued for a long time will usually suffice. I have repeatedly syringed Grapes until the berries were coloring, and I once found it necessary to wash off the insects with a syringe before the grapes could be used. Rain-water is the best for syringing purposes, since it contains no lime, which seems to be the cause of the spot when the vines are sprayed. A ripe bunch of grapes can be cleaned without disturbing much of the bloom by holding the syringe over it and giving it a sharp spray in the middle. As soon as the red spider shows itself, which can be easily determined by the reddish tint of the foliage, and the pest rarely appears until after the Vines have flowered, the pipes should be made warm in the evening and painted with lime and sulphur, although care should be taken that they do not get too hot. This treatment must not be resorted to during the flowering period nor after the grapes begin to color. The house should always be kept well damped, except in dull weather. On one occasion I had nearly cleared a grapery of the spider by washing it with hot water. It was an old-fashioned house, and we took the rods outside and thoroughly cleaned the interior, painted the sash-bars and walls with kerosene, and afterward gave them a coating of lime-wash.

There should never be any intermission in the vigilant watch against these insects. Many persons neglect their Vines after the fruit is gone. If it is practicable they should have copious spraying for some time longer and all the air possible. In addition to the remedies mentioned, painting a house is always a great help.

South Lancaster, Mass. *W. Downs.*

## Preparatory Work.

AT this season much can be done in preparation for the outdoor garden, since many plants can be more readily propagated now than at any other time.

A border of old-fashioned flowers is a pleasing feature in itself in many gardens, and, besides, furnishes flowers suitable for cutting. Among plants for such a border, especially if it is intended to hide an unsightly fence, Hollyhocks are useful, some of the improved varieties forming massive spikes of brilliantly colored flowers. They can be easily propagated at this time by cuttings. If a few old roots are placed in pots or boxes in a moderate heat a number of shoots will soon be thrown up. These shoots can be taken off when they have made three or four leaves, and rooted in a sand bed. After they have become established they should be placed in a cold frame until planting time.

The garden varieties of Phlox are also particularly effective in such a border. They supply a wide range of color, from pure white to crimson and purple, and in good soil the trusses of flowers are very large. They can be propagated, either by seeds, by cuttings made from the young growth, or by root-cuttings. The best method at this season is to use cuttings made from the young shoots. The stock plants should be treated in the same way as Hollyhocks. Cuttings of Phlox root in a short time if placed in a sand bed in moderate bottom-heat; but it is important that they should not at any time be allowed to wilt, either from want of water or exposure to too much sunshine.

Pentstemons also include a number of showy garden varieties that can be used advantageously with Phlox. Both are useful as cut flowers, and continue to bloom for a considerable length of time.

Among the plants that may be used for edging a mixed border of flowering plants none are more showy than dwarf Nasturtiums. I prefer, in this latitude, at least, to sow the seeds of Nasturtiums in their permanent position out-of-doors as soon as the weather will permit, instead of raising them in pots. The plants whose roots have not been disturbed seem to have more vitality during dry hot weather.

Torenia Fournieri, and its white form, known as White Wings, are also good plants for edging. They produce an immense number of flowers, but are most satisfactory when planted in partial shade. Seeds of these can be had from almost any seedsman, and should be sown as soon as possible to secure strong plants. Torenia-seeds germinate better in the shade than in full sunshine, and should be placed in a warm greenhouse. Canna-seeds should be sown at once; they will germinate much more rapidly in strong heat. The plan of soaking them in warm water for a day or two before planting them is a better way of preparing them for germination than that of filing a hole through the hard outer shell, as has sometimes been suggested. If a succession of Sweet Peas is desired, it is well to start some seeds in pots in the greenhouse. After hardening them off in a cold frame the seedlings may be planted outdoors almost as early as the seeds of the outdoor crop are sown, thus gaining two weeks or more in the time of flowering.

Holmesburg, Pa. *W. H. Taplin.*

## Novelties in Annuals.

FEW romances are more fascinating to one with gardening instincts than a first-rate florist's catalogue, and the fascination seems to increase with one's longer experience. Of course, there is always the familiar list in a seed catalogue, ranging from Abronias to Zinnias, of which we know each item, and most of which have been familiar at one time or another in the garden. But few catalogues are so poverty-stricken as not to offer within their usually vivid covers something which may appeal to the imagination as a possible prize. The more important catalogues always offer, apparently, sterling novelties well worth trial, and if these do not prove equal sometimes to the description, one is at least repaid by the enjoyment of them in anticipation, not to speak of the knowledge gained by experience. Sometimes the catalogue-maker paints his flowers in colors too lustrous, but usually it will be found that the descriptions are correct, as far as they go, although, as is natural, the weak points of a new plant are not insisted on.

As garden plans are now being made and selections for the coming seasons are in mind, a few remarks about the recent offerings of new seeds and plants may be helpful. These notes will be confined to plants and seeds easily secured and to those things likely to interest the amateur grower of a general collection of annuals, etc. A general review of the catalogues reveals an unusually small number of novelties in the more important annuals. No season ever passes without bringing forward some new China Asters, and this year one is offered of distinct form and striking character. This, which is known as "Japonaise," and offered by Vilmorin & Co. in rose and pink, is figured as a large flower, with long, very narrow-pointed, rather irregular petals, and much resembling a Chrysanthemum in effect. Of the recent China Asters the Branching or Candelabra Asters have proved valuable for their late-flowering and long-stemmed habits.

August-flowering China Asters have been much ravaged here lately by the blister-beetle, which devours the flowers as rapidly as they show color. The Yellow Aster should be rather highly colored. The strain of flowers offered this season is said to be of a clear sulphur-yellow. Asters of this color are offered at regular intervals, but previous introductions have always needed the eye of faith to discover the tint. This is an attractive novelty, but it may be said that the sulphur-yellow of the florist usually proves to be a lurid yellow, very ineffective and unpleasing. There are others—The Lady in White, etc.—but few of the annual introductions of Asters prove to be improvements on the standard old varieties, which cost only a trifle, and whose colors are pure and forms entirely satisfactory.

A Wallflower is offered which is said to flower in three months from seed, with the quaint coloring and delightful fragrance of the old favorite, of which we never have too many in the garden.

Sweet Peas have become so important, and are in such demand, that we have the usual number of new varieties, the most important of which seems to be Blanche Burpee, a white-seeded white variety, said to be of very pure color and fine form. This is an Eckford variety. Reports of trials by growers do not indicate that it is superior in purity of color to Emily Henderson, though of slightly different form. California, in recent years, has become the nursery for Sweet Peas, for nowhere else does stock increase so rapidly. In consequence we are now able to secure quickly all the new varieties at moderate prices, and no longer have to wait some years, as we once did, while stock was being worked up in less genial climates. Growers of Sweet Peas have noticed lately that there has been a tendency to produce double flowers among the modern improved varieties, and this year we are offered for the first time seeds of double Sweet Peas, said to produce fifty per cent. of double flowers. This will interest some growers and irritate some purists. To me the double flowers seem to be neither more or less beautiful than the single ones. If one has a greenhouse or warm frame, seeds of Sweet Peas may now be sown singly in thumb-pots with large drainage holes. They readily germinate, and if the pots are set on loose earth the roots will work into it, and it will not be necessary to repot. The plants will be in good condition to transplant as soon as the garden can be worked. This inside planting is particularly useful for the white-seeded varieties and where the garden is too cold and wet to permit of early planting.

Without prejudice I should say that double-flowered Morning Glories, Ipomœa purpurea, seeds of which are offered, are curious, not pretty. Those which I have tried have produced a moderate number of flowers with numerous confused petals among a wealth of foliage. The flowers, unlike other Ipomœas, are rather lasting. There are many Ipomœas offered this year, and one can seldom go amiss on Morning Glories, with their usually pure colors. Every one should grow the variety or species which has lately been reintroduced as the "Heavenly Blue," the true Ipomœa rubro-cœrulea, a most striking and delightful flower.

Those who fancy double Petunias are likely to be very much pleased with the "Double Giants of California," as they possess all the merits of the ordinary double flowers in an enhanced degree, being as large as Hollyhocks. Single Petunias, which have their uses in the garden, have also been transformed in California, and the new strains are now well fringed and as big as any one could desire.

Of other important seeds not new, but still in the novelty lists, Nemesia strumosa is a Cape annual with very attractive flowers, which seems to have been little grown yet. The seeds are somewhat like those of Stocks and easily ruined in the seed-pan by overwatering or too much warmth.

Begonia Vernon has proved to be such a good bedding plant that other forms of Begonias for the garden are likely to excite interest. B. Erfordiæ is said to be a cross between B. Schmidtii, a well known free-flowering kind, and B. Vernon, which is a form of B. semperflorens.

Hibiscus Sunset, a tender perennial said to flower the first season, seems to have attractions and to be worth trial. The flowers are creamy, with a crimson maroon centre. A form of same character tried by me last season grew very vigorously.

The other offerings of the season are of minor interest, being mostly new varieties of less important flowers. I notice a new strain of climbing Nasturtiums, called Madame Gunter hybrids, but my experience with these has been that they are very vigorous and bright-colored, but no more so than the strains usually offered by our best seedsmen.

Saintpaulia ionantha of last year, still in the novelty list, is a charming little African gesneriaceous plant, which is, of course, to be grown under glass. It is a quaint little plant, forming a rosette of attractive leaves, crowned with small purple single flowers and producing a pretty effect.

Elizabeth, N. J. *J. N. Gerard.*

## Notes from the Harvard Botanic Gardens.

BRUNFELSIA (FRANCISCEA) LATIFOLIA is a handsome and very satisfactory stove shrub. It makes a shapely plant three to four feet high and produces an abundance of lavender-colored flowers about this time of year. Its leaves are broad, elliptic and acute, four to six inches long and about two inches broad. The deliciously fragrant salver-shaped flowers are produced at the ends of the branches. Of a lavender color when they first open, they become almost white in a day or two. B. latifolia is a native of Brazil, and was brought from that country in 1840. Another good species, also in bloom now, is B. eximia. Its habit is like that of B. latifolia, but the leaves are different, being dark green and oblong-lanceolate, and the flowers are of a deep purple color. This plant also came from Brazil, but was introduced a few years later than the first-named species. When the blooming season is past, the plants should be potted, using a light, rich compost, and they should be grown in a strong moist heat. The Brunfelsias are propagated from cuttings, which root easily if placed in sand with good bottom-heat. The small young plants flower freely as well as the large ones.

The genus Grevillia contains plants which bear handsome flowers as well as decorative foliage. Perhaps the most desirable species grown for its flowers is G. Thelmanniana, also known in gardens under the specific name Preissii. A good specimen, four feet high and a yard across, is almost a constant bloomer here, but at this season it produces its flowers in greatest profusion. It is an erect, much-branched shrub, and the branchlets have a graceful drooping habit. Its leaves are pinnate, and the singularly shaped flowers are bright deep red, and yellow at the tip, borne in dense pendulous racemes three to four inches long. It is a south-west Australian plant, and grows well in a temperature ranging from forty-five to fifty degrees. When it requires potting, this should be done after the flowering season. The pot should be well filled with roots before the plants are shifted into a larger size, and they should not be given too large a shift, since the plant does best in a moderate quantity of soil, when it is less liable to suffer from overwatering. During the summer the plants should be plunged outside in a shady place and taken back to the greenhouse before frost in the fall. Half-ripened wood makes good cuttings, and these root easily in the bench with a little bottom-heat. When the plants are young they require frequent pinching, so as to make them close and bushy.

Botanic Garden, Harvard University. *Robert Cameron.*

**Damping Off.**—At this season there is a great deal of this trouble among seedlings of all kinds, caused by various kinds of fungi. Where small quantities of choice seeds are grown in variety the seeds of each kind are generally planted separately in small pots or boxes, and it is, therefore, much easier to treat them than it would be to deal with a large quantity of seed in a bed or bench. In any case, the soil must be kept as dry as possible, without hindering the process of germination and growth, until the seedlings have made two or three rough leaves. Then they may be safely transplanted, although much watchfulness is still necessary. Where the soil is used in small parcels it may be sterilized in a hot-air oven. This process will destroy the germs of fungi. Sulphur may be mixed with the soil, using one part to thirty parts of soil. Powdered charcoal is also helpful when mixed with soil in the ratio of one to ten. As all propagators well know, this damping off is not confined to seedlings, but also attacks cuttings. It is for this reason that we prefer to use coarse, sharp, clean sand in our propagating-benches, the material least favorable to the growth or retention of noxious germs. But even sand becomes corrupt from long-continued use, and should be washed and sterilized occasionally.

Cornell University. *Michael Barker.*

**Strobilanthes isophyllus** and S. anisophyllus are both good plants, and are blooming very freely just now. If they receive anything like favorable treatment they will bloom for two or three months. They are dwarf and bushy, with very dark green leaves, and carry a great profusion of lavender mauve-colored flowers. Young plants are very easily raised from cuttings, and during summer they should be planted out in the

garden, and taken up and housed in the fall when there is danger of frost.

**Peristrophe speciosa.**—This old favorite is very easy to grow, and brightens up the warm greenhouse during the dullest part of winter. It makes a thick, bushy, but somewhat upright, plant, and its bright purple blossoms are very attractive. Its flowers are not good for cutting, but a group of the plants serves to make a fine display at this time.

Botanic Garden, Harvard University. *Robert Cameron.*

## Correspondence.

### California Orange Groves.

To the Editor of Garden and Forest:

Sir,—The January freeze in Florida, which so severely injured the Orange-trees, has shown that orange-growing in that state is a precarious business. It is, perhaps, not generally known, but is none the less true, that the orange growers of California are exposed to the same risks that have this year resulted so disastrously to their Florida rivals. During the past four years many oranges have been frozen in southern California, in some sections from twenty to sixty per cent. of the crop having been lost each season. Every year the thermometer has hovered, for a few hours, on a few nights, at a point below the freezing-mark. A temperature of twenty-four degrees above zero for three or four hours means death to the crop. Should it be a few degrees lower, the trees as well as the fruit would be injured. This is a contingency that hangs over the grower every year, and adds greatly to the hazards of the business.

In addition to the danger of frost, the California grower must contend with high freight charges, on account of his distance from market, and with the constantly increasing competition of his own neighbors and of growers in other localities, such as Arizona, where the industry is yet undeveloped, but which may possibly become an active rival in the future. For several years he also ran the risk of robbery by dishonest middlemen. This last risk has been reduced to a minimum by the formation of fruit exchanges, which sell all the fruit of certain localities, ship only to known dealers, and demand a certain stated price, delivered on the train, before the oranges are forwarded. Furthermore, the California grower must make a market for his fruit in the large cities of the east. The taste of consumers must be educated to appreciate the California Navel orange, since most people prefer the sweeter Indian River orange. But California experts claim that connoisseurs and gourmets appreciate more highly the subacid, nutty flavor of the Washington Navel, and that they reject the Florida oranges as too sweet, and, therefore, insipid. If this assertion is true, it is also true that the tastes of the multitude have not yet been highly educated. This is partly the fault of an injudicious handling of the product. Just as California wines are adulterated and imitated to the detriment of the genuine, so the sale of the genuine California Navel orange has been hindered by dishonest growers and dealers, who have shipped unripe, inferior fruit, and sold it as the best. This year, owing to the unexpected demand following the Florida freeze, not a little of this fruit was sent to market before it was at its prime. An additional reason for haste was the fear of a freeze in California.

The estimated crop in California is two and a half million boxes, about half the amount of the Florida crop, had there been no frost in that state. At the start the net price to the grower, for the best Navels, was two dollars a box. California growers anticipate that the frost in Florida will check orange-growing in that state for several years to come and so give their own product a better chance than heretofore to gain favor in eastern markets.

Very few new Orange orchards are being planted in California, as compared with the plantings of former years, but the price of the best orange land has not been materially reduced. The best orchards now in bearing cost their owners fully one thousand dollars an acre before returns are received from the investment. Except in isolated instances, good orchards are not being sold, unless at figures based upon that cost to the holders. Tourists who have expected to secure bargains on account of the general depression in business have, as a rule, been disappointed. The conditions of the present year, unless the California fruit should also be frozen, will encourage owners to maintain fancy prices.

It is an open question whether these orchards are worth fancy prices. Their owners no longer hold out to intending buyers the profuse promises of boom days, but claim only that these orchards will pay a good return for labor and for the capital invested. A moderate estimate of an average yield from a good, well-cared-for, mature orchard of Washington Navels is three boxes to the tree, or from two hundred and forty to two hundred and seventy boxes to the acre. This would seem to offer satisfactory returns, even at one dollar a box, net. But, on the other hand, taxes, labor and freight rates are all high. In some places the water-supply is uncertain, and the orange-growing communities, like all communities which depend for prosperity upon one resource, are liable to complete ruin from a single cause. This danger may be remote, but its existence, however remote, is a constant menace. Such ruin was formerly threatened the Orange groves by their parasite pests. These have been largely subdued, although the scale insects, particularly the red scale, are still troublesome. There remains that insidious enemy, frost, against which no vigilance can guard, and which is as voracious as fire. Although no frost has yet been severe enough to injure the trees in California, it is not impossible that Florida's experience this year may be that of California next year. Altogether, an Orange grove seems to be very like a mine—an excellent thing when producing, but liable to a disappointing pinching of the vein.

Redlands, Calif. *Wm. F. Tisdale.*

### A Venturesome Hepatica.

To the Editor of Garden and Forest:

Sir,—Several years ago I began to carry home with me from walks in fields and woodlands the roots of wild plants and set them in a suitable part of the garden. Many of these are still thriving, though some, like the Trailing Arbutus and Fringed Gentian, have resented the change and died out. Foam-flowers, Tiarella, from the Catskills, are well established here, and Harebells from the Adirondacks, Cardinal Flowers from Long Island, Blood-root from Staten Island, and a wide range of wild flowers from other near-by places. Besides the flowers provided in season, these wild plants afford occasional surprises, as when on the 26th of December last I found under a winter covering of leaves in a clump of Hepaticas, brought from Staten Island seven years ago, a sturdy flower which did not seem to know that it was braving the cold of the shortest days of the year. A few days before a Blood-root ventured to unfold its white petals, and on January 11th of this year, when for a few hours spring seemed in the air, two more Hepatica flowers ventured out. There were buds which promised to open soon, and, no doubt, they are awaiting the melting of the snow and will expand with the first genial weather. The place where these flowers appeared is sheltered from the west winds and from the east, but fully exposed to the north and south. Shall we call them belated autumn flowers or precocious harbingers of spring?

Bayonne, N. J. *H. J. S.*

### A Search for Gold Thread.

To the Editor of Garden and Forest:

Sir,—It is now almost a year since inquiries in a local newspaper as to where several plants, among them Gold Thread, Coptis trifolia, and Wild Ginger might be found, led to the formation of a society bearing the rather ambitious title of the "Natural Science Association of Harrisburg." Although the society numbers among its members an ornithologist of distinction, and several amateur students of entomology and geology, its chief interest has been from the beginning botanical. The club meetings are held once a month, when plants are brought in for examination and exchange, or papers are read and discussed. When the weather permits, weekly walks are taken to or from points within a ten-mile radius of Harrisburg. These walks, or explorations rather, as they are generally across country, some of it very rough, are a revelation to many of the members of the inexhaustible supply of subjects for investigation close to a city.

Out of a population of fifty thousand people, it is doubtful if a hundred know of the existence of the Iris meadows on the Conodoguinet; of the Rose Mallows in the swamp running from Harrisburg to the foothills of the North Mountain, five miles distant; of the Hepatica-covered bluffs on the eastern side of the swamp, or of the great belt of Red-bud that lies at the edge of the woods on the mountain itself. Gold Thread is yet to be found, but we know now where to look for Wild Ginger in the ravines of the York hills, the blue bells of the Mertensia Virginica in the meadows at their base, and the one meadow lying in a fold of the hills where Castilleia coccinea is found.

Another plant, so far found in only one place, is Lithospermum canescens, on a limestone bluff overhanging the Swatara Creek. Quantities of herbaceous plants have been located

and the time of their flowering noted as a guide for the future; among these are the great beds of Trillium grandiflorum on the Second Mountain. In Franklin County, a search for Gold Thread in the Rhododendron swamps of the South Mountain revealed Dalibarda repens and Waldesteinia fragaroides. In the same swamps are found Magnolia glauca, Sweet Magnolia it is called there, and quantities of fragrant Azalea, R. viscosum, also var. glaucum, but thus far no Gold Thread. The meadows of that county show quantities of Gerardia tenuifolia, and in one meadow Pycnanthemum linifolium and Poterium Canadense were found. The finding of Magnolia glauca was of special interest, since Professor Porter assigns its western limit in Pennsylvania to a ridge of the South Mountain, in Lebanon County, or quite seventy miles farther to the east.

All the South Mountain plants were located at an elevation of about one thousand feet, but as none of these last mentioned have been found near Harrisburg, it is a question whether the cultivation of limestone soils destroys many of our most beautiful wild flowers, or whether, like the Rhododendron, many of them are never found in limestone soils.

Harrisburg, Pa. *M. L. D.*

## Meetings of Societies.

### Western New York Horticultural Society.—IV.

THE brief notes which follow conclude our report of the late annual meeting of this society:

INSECTS INJURIOUS TO FRUITS.

Professor M. V. Slingerland referred to the introduction of the San José scale, and then of the similar Plum scale, which has done much damage in some fine orchards in western New York. These remain on the tree all the year as hard, brown, conspicuous scales, easily found, and appearing like hard brown peas, which leave white spots under them when removed. The eggs are laid under the scales about the last of May, the scales usually being on the under side of the branches of the last two years' growth. The only alarming appearances have been, so far, confined to Geneva, Rochester and Lockport, but they caused considerable damage. The indications are, the young scales on the trees, which may be found in July, the old cases on the trees, and the presence of large quantities of honey-dew and its black fungus, as in the case of the Pear-tree psylla. The young scales pump out the sap and thus stunt the growth. There is a similar insect on Quinces, Apples and Elms. The Japanese Plums do not seem yet to have been attacked. In August the young scales place themselves and never move again. The next May egg-laying begins about the middle of May and continues till the hard case is nearly full, each mother laying about a thousand eggs. The eggs begin to hatch about the first of July, and the young then begin to crawl to the leaves, where they place themselves near the veins, preferably on the under side. The scales, now five millimeters long, cannot readily be distinguished without a lens. About the last of August they migrate to the under sides of the smaller branches, where they pile up often two or three layers deep. They are brown in August and seal-brown later. About ten per cent. fall with the leaves. The scales are now about twice as large as when hatched. The next spring they are full-grown. If left to themselves they would move slowly, but in their migrations they may get on birds, insects and leaves and be thus transferred. There is little danger of infection from nursery stock, as the scales have not been found on trees under five years old. The scale has two enemies—one a lady-beetle that eats it, and a parasitic insect. The scale must be killed by contact. The kerosene emulsion of a strength of one to four will kill the greater part of them. Between May and October there is but one week in which to operate with any chance of success, and that is about the first of July, when the insects are moving on the limbs. It is impracticable to kill them on the leaves, except by gas treatment, and this is too expensive. In the autumn, after the leaves fall, the emulsion diluted to a strength of one to four should be used and the tree drenched with it. The dead scales are a bright brown, hard to distinguish from the living ones. Most of the scales are on the under side of the branch and in crevices of the bark. If sprayed in the fall, again some time in the winter, and in March twice, the cost will be about three cents a tree for a thorough application.

PEAR BLIGHT.

In an illustrated lecture on this subject, Professor Waite showed that the flowers could be infected artificially, the nectary being the only part of the tree that can be successfully infected without puncturing. It was shown, experimentally, that insects carry the germs in their rounds from flower to flower and thus inoculate the blossoms. Trees overstimulated, especially with nitrogen, seem to take the blight most readily. The blight works downward, and the point it has reached at any time is clearly defined. If the diseased parts are removed the roots recover. In cutting off blighted portions in the dormant season it is only necessary to cut just below the blight. In the growing season the branch must be cut a considerable distance below, and in both cases it is advisable to burn the parts.

The germ usually enters the tips next the blossoms, and advances towards the trunk. Three weeks after the twigs die the germs usually all die. The germs have never yet been found in the soil, but they have been found to live over in affected parts next to the living tissues. They will sometimes live through Bordeaux mixture. If the weather could be controlled, then pear-blight could be, as moist, muggy weather favors it. Bartlett is one of the worst varieties to blight, and so is Clapp's Favorite. All Pear-trees, whether dwarf or standard, should be headed in as a preventive measure. Nitrogenous manures should be used sparingly, and blight-proof varieties, such as Angoulême, Keiffer and Lawrence, should be preferred.

Mr. Beach said there had been some injury this year from spraying with the Bordeaux mixture. If the copper sulphate is diluted, or partially diluted, before adding the lime, and the whole is then well stirred before adding the ferrocyanide there will be no trouble if no brown color appears. Free copper is often the cause of injury. The extra irritation of the cold damp weather makes the roughness on so many varieties, Western Beauty and Ben Davis among others. Apples that have been sprayed, even in a wet season, keep better than others. He also said that lime was fresh-slaked if it had been kept under water constantly after it was first slaked and not allowed to dry. He cautioned users of the Bordeaux mixture to turn the nozzle back in the barrel after every stop of even a minute, as the ingredients settle immediately, so that the first application will otherwise be too strong.

Mr. Woodward spoke encouragingly of nut-culture. He had Paragon and Numbo Chestnuts six years old that have borne three years. He took cions in 1893, and top-grafted on native trees, and had fruit in 1894. Paragon is four times as large as our common chestnut. It is a native seedling of a foreign variety. Numbo is larger than Paragon, but not so sweet. He whip-grafted, cleft-grafted and slipped cions under slitted bark. His greatest trouble is in having the cions broken off by wind after they begin to grow.

Among the new diseases reported are the Peach-scab and the powdery mildew of the Peach. In Niagara County, Bordeaux mixture injured the foliage, but did not check the trouble. Ammoniacal carbonate of copper also hurt the foliage, with but slight results in checking the disease. In Tompkins County there was a new Raspberry disease, in which the fruit dries on the bushes, the stems are brittle and break like pipe-stems.

Mr. Hooker said he had three to five hundred trees, fifteen years old, killed outright by the scales. In his neighborhood they had been found on Hickory, Elm, Orange, Quince and Honey Locust. The German Prunes are not exempt, but the Lombard and Reine Claude were the worst affected.

## Notes.

In our notes on new plants last week it should have been stated that all the hybrid Cypripediums named were raised at the United States Nurseries of Messrs. Pitcher & Manda, at Short Hills, New Jersey.

Dr. Hoskins says that the Green Mountain grape ripens in northern Vermont thoroughly every year, and in thrift, productiveness and quality is proving all that could be desired as a family grape; and he adds that there is only one other grape of good dessert quality which he has found early enough for this region. Is this the Diamond?

One of the most famous trees in Germany, the so-called Cathedral Linden of Brunswick, fell and perished a few months since. It must have been large enough to be popularly noted five centuries ago, for in a pamphlet published in the year when America was discovered may be read the statement that, in 1473, the summer had come so early that "the Lime-tree of Brunswick" was in leaf on Easter Day.

We have received from Messrs. Siebrecht & Wadley several flowers of the Rose Belle Siebrecht, which has already been described in these columns. We only need to add that careful observation of these flowers proves the truth of what has been claimed as to their lasting qualities and as to the singular purity of their color under artificial light.

Experiments at the station in Kingston, Rhode Island, confirm former tests and show conclusively that air-slacked lime tends to increase the disease known as the scab of potatoes. The natural acidity of soils tends to diminish the disease, and the reason why barnyard-manure aggravates it is attributed to its alkaline action in overcoming the souring of the soil. Barnyard-manure, where stock is fed on uncooked potatoes or beets which have the disease, may carry the germs to the soil and increase the disease.

A correspondent of the *Baltimore Cactus Journal* advises that when Cacti are repotted, the most suitable time for this being February or March, the soil used should neither be damp nor dust-dry, but it is best to err on the dry side. When turned out of their pots most of the soil should be shaken from the roots of the plants, and the roots should be well spread out when they are shifted, and good drainage should certainly be secured. A handful of sand put directly under the plant is in all cases beneficial.

At this time of the year branches of spring-flowering shrubs and trees, when placed in water, readily open their buds, and in one of the up-town flower-stores, where a specialty is made of this kind of decoration, among the plants treated in this way were Crab-apple, Japan Quince and Forsythia. Flowering sprays of different species of Acacia, Chorozema and Jessamine are also occasionally seen, and among potted shrubs in bloom now are Cytisus, Azaleas, Ericas and double-flowering Almonds. Among the commonest herbaceous potted plants in flower and on sale are Cinerarias, Pansies, Primulas and Cyclamens. Cut flowers of white camellias, which have been practically banished for a long time from the markets, seem to be slowly gaining a foothold. Of course, there are quantities of hyacinths, tulips and daffodils, with poet's narcissus, which seem to be popular for button-hole bouquets. Cattleyas are very abundant, and retail readily at fifty cents each.

Unless Strawberry-plants are shipped very early in the season, there is much danger that they will heat in transit. This is especially true when they carry a considerable quantity of heavy green foliage, which has probably been warmed up in the middle of the day before the plants are packed, and packed closely, as is often necessary. Mr. J. H. Hale writes to the *Florists' Exchange* that specialists in Strawberry-plants put on large numbers of men to dig them early in the morning, and carry them at once into cool cellars, where they are trimmed and packed. But even where no digging is done in the middle of the day, unless they are very carefully handled, the plants are in danger, and, therefore, an experiment now in progress in Delaware will be watched with interest. A nursery firm there has built a cold-storage house, in which all the Strawberry-plants are put as fast as they are packed, and cooled through before they are delivered to the transportation companies. The expectation is that with this treatment there will be no trouble from the heating of the plants.

Mr. John N. May writes to the *American Florist* that because Roses are coarse and gross feeders many persons make a mistake in giving them, when grown under glass, too much, or, at least, too strong liquid-fertilizer. It is never safe to use more than half a pound of nitrate of soda, for example, to fifty gallons of water, and an application of this once in twenty-five days is often enough. Old plants, which have been growing two or three years in the same soil until it is a mass of roots, will take liquid-manures oftener, especially when the days are getting longer, the sun brighter and the vital forces of the plant more active. The safest method, however, is to feed lightly; that is, to make the liquid fifty per cent. weaker than is usually considered the proper proportion, and when the plants are in proper condition for being watered to give them a good soaking with this diluted food. The roots can then take it up at once and the plants will feel the effect immediately. Liquid-manures of all kinds should be used with great discretion, and Mr. May never applies any liquid which is so much discolored that he cannot see through it.

Small quantities of lettuce which have escaped the frost in Florida are now in market, but, except that which is grown under glass, most of it now here comes from Bermuda. A few new potatoes are also coming from Florida, but the supplies of fresh vegetables from our southern seaboard has practically stopped for the present. Such hardy plants as Strawberries will, no doubt, put out new blossoms and bear a crop of fruit later on, but there never has been in this country so great a destruction of garden crops by frost as that caused by the recent cold weather in our southern states. All the string beans we have are now coming from Bermuda, and Havana is sending us tomatoes, peppers, okra, eggplants and onions. It has been a rich harvest for those who have grown vegetables under glass. The market has readily taken at good prices all that has been offered. Long, slender green shoots of forced asparagus sell for $1.50 a bunch of a dozen stalks. Cucumbers bring twenty cents each, lettuce fifteen cents a head, new carrots ten cents a bunch, ordinary red tomatoes seventy-five cents a pound, and a fancy yellow variety which comes in small quantities from Hackensack commands $1.00 a pound.

A bulletin just issued from the United States Department of Agriculture gives a concise description and history of the Peanut, together with notes on its cultivation and uses. As is well known, this is not really a nut, but, more properly, a ground pea. Analysis gives the peanut a high rank as to its food value, since it contains twenty-nine per cent. of protein and forty-nine per cent. of fat, and it should be classed with such concentrated foods as the soja-bean and cotton-seed, while the vines are superior to Timothy hay as feeding stuff, and, of course, would be equal, or superior, to Clover hay if any considerable percentage of nuts were left on the vines. The average yield of peanuts in Virginia is about twenty bushels to the acre, and, in Tennessee, thirty-two bushels, but fifty to sixty bushels ought to be an average crop, and one hundred bushels not an uncommon yield. Fair Peanut-land, when properly treated, should produce fifty bushels to the acre, with one or two tons of excellent hay, in ordinary seasons. Four million bushels are annually raised in this country, which is only about one-seventh of the crop of the world. Millions of bushels are used in the Old World for the production of oil, in which these nuts are very rich.

No more beautiful flower grows in New England than the Sabbatia, and at Plymouth, where it is especially profuse and luxuriant on the borders of the ponds so characteristic of that part of eastern Massachusetts, it is held in peculiar affection, and, one may almost say, reverence. It is locally called "the Rose of Plymouth," and during its brief season of bloom is sold in quantities in the streets of the town and used in the adornment of houses and churches. Its name comes from that of an early Italian botanist, Liberatus Sabbatia; but this well-established truth is totally disregarded by local tradition. Almost every one in Plymouth firmly believes that the title is due to the fact that the Pilgrims of 1620 first saw the flower on a Sabbath-day, and, entranced by its masses of pinkish lilac-color, named it for the holy day. Indeed, this belief is so deeply ingrained in the Plymouth mind that, we are told, strong objections are made if any other flowers are irreverently mingled with it in church decoration. Yet the legend was invented not more than twenty-five years ago by a man whose identity is still well remembered; and thus it is of even more recent origin than the one, still more universally credited, which says that the Pilgrim Fathers landed upon Plymouth Rock.

Large areas of Pine-lands in lower Michigan, from which the timber has been cut, have passed back to the control of the state on account of the non-payment of taxes. The purchasers have thought that this sandy soil, especially where it has been burned over, will not produce a second growth of Pine for a long time, and it is, therefore, abandoned as a perpetual wilderness of deciduous coppice-wood, valueless for timber. The editor of the *Northwestern Lumberman* quotes the opinion of Mr. Carey, special agent of the Forestry Division of the Department of Agriculture, who has been making investigations throughout the state, and he has arrived at the conclusion that this land can again produce as fine a growth of White and Red Pine as ever grew on this continent. All that is necessary, he says, is to keep out fires, browsing sheep and cattle, and in forty years the second growth of Pine will make profitable cuttings, as it has done in Maine, New Hampshire and other parts of New England. It will be a fortunate thing for Michigan if this hopeful view proves correct. In any case, it is worth while for the state to take these lands in hand, and begin at once not only to pass laws for protecting their young timber-growth, but to enforce these laws with vigor. We should expect to find that lands which have been burned over and over again have lost much of their original timber-producing power. But this is a good reason for husbanding all the fertility that remains.